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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,723	01/30/2004	Ernest E. Muenchau	SAIC0098-US	6083

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EXAMINER	
ARTMAN, THOMAS R	
ART UNIT	**PAPER NUMBER**
2882	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/767,723	MUENCHAU ET AL.	
	Examiner	Art Unit	
	Thomas R. Artman	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 6 is objected to because of the following: it appears as though claim 6 should depend from claim 5 rather than claim 1 in order to remedy an antecedent basis issue. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 10 and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Bermbach (US 6,031,890).

Regarding claims 1, 11 and 21, Bermbach discloses an automated target inspection system and method (Fig.2) including:

a) a scanning zone comprising a radiation source 6 and a radiation detector 8,

b) a first sensor component 10 for automatically sensing when a first portion of a moving target has passed through the scanning zone and a second portion of the target is about to enter the scanning zone, where

c) the first sensor component sends a signal to the automated target inspection system to initiate a scan of a second portion 40 of the moving target upon sensing that the second portion is about to enter the scanning zone, and

d) a shutter, triggered by the signal from the first sensor component for allowing radiation from the radiation source to pass through the scanning zone when the second portion is passing through the scanning zone and for closing off the radiation when the second portion is no longer within the scanning zone (col.2, lines 32-52).

With respect to claim 2, the first portion is a passenger portion (cab of a truck).

With respect to claim 3, the second portion is a payload portion (trailer).

With respect to claim 4, the first sensor component senses a gap between the first portion and the second portion of the moving target (all trucks have gaps between the cab and trailer, and the sensor will notice it).

With respect to claims 10, 18 and 19, Bermbach counts photons passing through the detector from the source with the detector 8 and provides an image based upon the detector output.

With respect to claim 20, Bermbach discloses that the objects are moving at speeds greater than zero, and further that the device can handle slow moving vehicles (under 10 mph) as well as faster vehicles.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-7, 12, 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bermbach, as applied against claims 1 and 11 above, in view of Yagi (US 6,400,795).

With respect to claims 5, 15 and 16, Bermbach does not specifically disclose the details by which the radiation source is shut off, particularly does not mention a shutter made of a shielding block that is driven by a solenoid configuration.

Yagi specifically teaches the use of a shutter made of a shielding block 2 (Fig.1) and is driven by a solenoid configuration 3. This is one known manner of controlling x-ray radiation beams for safe, controlled exposure procedures.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Bermbach to use a shutter made of a shielding block and actuated by a solenoid configuration in order to safely and efficiently control an x-ray radiation beam in a known manner as taught by Yagi.

With respect to claim 6, neither Bermbach nor Yagi specifically disclose the material of which the shielding block is made. However, it is well known in the art to

make a shielding block out of tungsten for blocking x-rays, for at least the reason that it is lighter in weight than lead and is thus easier to operate with automated devices.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make a shielding block out of tungsten for a lighter, more efficient shutter as is generally known in the art, in the absence of any additional criticality or any unexpected results from the use of such material.

With respect to claims 7 and 17, neither Bermbach nor Yagi specifically disclose the use of a spring to actuate the shutter to close. However, it is known to use springs with solenoid actuators to mechanically bias the actuators for proper operation as well as for a mechanical safety interlock. If power is cut to the actuator mechanism, the device will automatically close the shutter, thus avoiding uncontrolled harmful radiation exposure.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Bermbach and Yagi to use a spring in the shutter actuator such that the radiation from the radiation source is shut off safely during normal or abnormal operation of an exposure procedure.

With respect to claims 12 and 13, neither Bermbach nor Yagi specifically disclose the times in which it takes to open or close the shutter. However, it is known to one skilled in the art that the shutter should move as quickly as possible in order to reduce undesirable radiation exposure, particularly when the object is no longer in the scanning region.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Bermbach and Yagi to have shutter speeds on the order of 10s or 100s of milliseconds for safe, efficient control of a radiation source, in the absence of any specific criticality or unexpected result to such shutter speeds.

Claims 8, 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bermbach, as applied to claims 1 and 11 above, in view of Adolph (US 6,649,906).

With respect to all three claims, Bermbach does not specifically disclose a second sensor component for detecting radiation outside of the scanning region and shutting off the radiation source in the event that such radiation is detected by the second sensor component.

Adolph specifically teaches the practice of the use of safety interlocks, particularly monitoring radiation outside of the scanning region (col.3, line 51, through col.4, line 2). The radiation levels are monitored by an input sensor outside of the scanning region, and the radiation source is shut down based upon the detected levels of radiation from the input sensor. In this way, harmful radiation to the surroundings, including to operating personnel, can be effectively prevented.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Bermbach to use a second sensor component outside of the scanning region for shutting off the radiation from the radiation source in the event that the second sensor component detects radiation in order to improve the operational safety of the radiation device as taught by Adolph.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Verbinski (US 6,255,654) shows a large container inspection device that uses gamma radiation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Artman whose telephone number is (571) 272-2485. The examiner can normally be reached on 9am - 6:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas R. Artman
Patent Examiner

Craig E. Church
Primary Examiner